

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20054

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In the Matter of)
)
Replacement of Part 90 by Part 88 to)
Revise the Private Land Mobile Radio)
Services and Modify the Policies)
Governing Them)
)
and)
)
Examination of Exclusivity and)
Frequency Assignment Policies of)
the Private Land Mobile Radio Services)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

PR Docket No. 92-235

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**Petition for Reconsideration and Clarification of the Mobile and Personal
Communications Private Radio Section of the Telecommunications
Industry Association**

The Mobile and Personal Communications Private Radio Section of the Telecommunications Industry Association (TIA) hereby submits this request for reconsideration and clarification of the Commission's final decisions in its "Refarming" proceeding.¹ Overall, the TIA supports the Commission's actions. This Petition is intended to bring to the Commission's attention certain inconsistencies in the newly adopted technical rules for private land mobile services that require either clarification or partial reconsideration and for which a consensus was obtained from Private Mobile Radio Section members.

Issue 1: Type Acceptance Requirements

The Commission's fundamental decision in this proceeding was to encourage the transition to radio technologies that increase spectrum efficiency less bandwidth through the equipment authorization process. As of August 1, 1996, equipment submitted for type

¹ *Report and Order and Further Notice of Proposed Rule Making ("Report and Order")*, PR Docket No. 92-235, FCC No. 95-255 (June 23, 1995).

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acceptance must be capable of 12.5 kHz operation or other equivalent efficiency.² After January 1, 2005, equipment submitted for type acceptance must be capable of 6.25 kHz operation or other equivalent efficiency.³ Equipment type accepted prior to each of the transition dates may continue to be manufactured and used indefinitely.

In its *Report and Order*, the Commission noted that its type acceptance rules provide manufacturers with flexibility to support grandfathered equipment through upgrades and modifications.⁴ However, the Commission apparently will not allow any modifications of existing 25 kHz equipment unless the device also has the inherent capability to operate over 12.5 kHz.⁵ TIA recommends that the FCC reconsider this policy and at least allow permissive Class II changes to 25 kHz equipment even after the August 1, 1996 deadline.

Manufacturers constantly incorporate modifications and redesigns into previously type accepted equipment consistent with the needs of users and the availability of parts or subcomponents. Since manufacturers will be able to continue to market 25 kHz equipment for the foreseeable future, it is important that they be able to provide the full range of technical support to fully satisfy customer needs. This includes allowing minor modifications to 25 kHz radios. Although TIA believes that most manufacturers will redesign all major 25 kHz product lines to include 12.5 kHz capability, some niche technologies may not require the additional flexibility to operate dual mode. For such limited instances, the Commission should allow manufacturers to perform Class II permissive changes to type accepted equipment authorized prior to August 1, 1996, without having to demonstrate an inherent capability for 12.5 kHz operation.

² 47 C.F.R. Section 90.203(j)(1), (j)(2), and (j)(3).

³ 47 C.F.R. Section 90.203(j)(4) and (j)(5).

⁴ *Report and Order* at para. 40.

⁵ 47 C.F.R. Section 90.203(j)(6).

Issue 2: Transient Frequency Response

The Commission has adopted a new technical standard designed to limit transient frequency emissions caused when transmitters are turned on and off.⁶ Apparently, the Commission's new rules are based on industry developed standards that are published as TIA/EIA Bulletin 603. As such, the TIA concurs with the Commission's actions to codify these standards.

However, the Commission's new rule section should make clear that its applicability pertains to equipment submitted for type acceptance after some future date certain. This will help ensure that existing and operational radios are grandfathered under the rules in which they were authorized. TIA doubts that the Commission intended to hold users responsible for compliance with a new technical rule that did not exist when their radios were designed and manufactured. In any event, most recent technologies already conform to the new limits and, thus, there is no concern for significant interference levels. For these reasons, the Commission should clarify Section 90.214 as appropriate to clarify that it applies to new applications for type acceptance.⁷

Issue 3: Emissions and Modulation Requirements

In recognition of the fact that its *Report and Order* paves the way for new modulation techniques to be introduced into the private land mobile radio services on frequencies below 512 MHz, the Commission attempted to remove unnecessary rules that limit licensee and manufacturer flexibility. In so doing, it significantly revised Section 90.211 to ensure that rules primarily applicable to FM modulation types do not impede the development of alternative technologies.

⁶ 47 C.F.R. Section 90.214.

⁷ TIA also notes that the table contained in this rule section inadvertently excludes transmitters designed to operate in the 421-430 MHz band. Thus, the heading of the second column should be revised to apply to transmitters operating between 421-500

TIA supports the Commission's rationale of encouraging new and innovative technologies. However, TIA also notes that the deletion of the FM deviation limits from Section 90.211 affects the continued design and use of FM technologies. Compatibility among different FM technologies is furthered by maintaining the FM modulation deviation limits and filter characteristics. It is therefore recommended that the modulation limits for F3E emissions be reinserted into the rules with their respective low pass post limiter transmitter filter characteristics as follows:

For 16K0F3E emission, 5.0 kHz maximum deviation with a post limiter filter meeting or exceeding the attenuation characteristic described in TIA/EIA-603 clause 3.2.15(a).

For 14K0F3E emission, 4.0 kHz maximum deviation with a post modulation limiter filter meeting or exceeding the attenuation characteristic described in TIA/EIA-603 clause 3.2.15(b).

For 11K0F3E emission, 2.5 kHz maximum deviation with a post modulation limiter filter meeting or exceeding the attenuation characteristic described in TIA/EIA-603 clause 3.2.15(c).

In addition, Section 90.211(a) as revised requires analog radios to meet the emission limitations of Section 90.210 "under all possible conditions of operation." This requirement places an undefined burden on manufacturers that may prove impossible to measure. TIA therefore recommends that this section be revised to better conform with Section 90.211(b) which refers to the equipment authorization measurement procedures detailed in Part 2 of the Commission's Rules. This will provide greater certainty for the manufacturing community as well as the Commission's staff.⁸

MHz. In fact, the second column also could be extended upward to apply to transmitters operating between 500-512 MHz thus eliminating the need for the third column altogether.

⁸ Also, a typographical error exists in Section 90.209 of the new rules. In the table of standard channel spacing and bandwidth following paragraph (a)(5), the entries under the Authorized Bandwidth column for the frequency bands 150-174 MHz and 421-512 MHz inadvertently read 25/11.25/6 kHz. These should both read 20/11.25/6 kHz. Furthermore, an additional typographical error exists in the frequency stability table of Section 90.213. The correct frequency stability for 25 kHz base station transmitters operating between 421-512 MHz band should be 2.5 parts per million instead of the listed 5 parts per million.


Finally, TIA has reviewed the Request for Stay of the Commission's *Report and Order* filed by the Land Mobile Communications Council (LMCC). The LMCC seeks a stay of the new licensing rules for a 6 month period to develop appropriate frequency coordination standards for station assignments 12.5 kHz away from regularly assignable channels. TIA understands that part of the LMCC's concern is based on the introduction of new technologies and the varying degrees of protection needed for their efficient operations. To this end, TIA notes that its Compatibility Committee of this Section is already addressing this issue and intends to provide detailed information before the coordinating committees and the FCC within the next several weeks. Part of this activity is developing standards for an adjacent channel protection ratio that could be used to develop adjacent channel assignment standards that are independent of the modulation technologies being used. It is the intent of the TIA to proceed most expeditiously in this effort so that any necessary delay in licensing can be minimized to the greatest extent possible.

Conclusion:

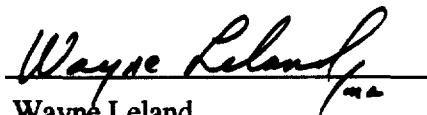
The FCC has chosen a course of action for leading the private wireless industry into the next century. With the changes suggested herein, manufacturers can begin providing the technologies capable of improving the service quality of the private radio users that provide so much to American society. Although the transition is expected to be demanding on all parties, TIA is committed to offering its technical expertise to facilitate a smooth migration.

Respectfully Submitted,

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